Bureau of Epidemiology & Public Health Informatics

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Epi Updates

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Mosquito Surveillance Conducted in Response to Northeast Kansas Floods

By Dr. Ingrid Garrison, State Public Health Veterinarian

Flooding of four northeast Kansas counties, Atchison, Doniphan, Leavenworth, and Wyandotte, raises concerns about an increase in mosquitoes. Although mosquitoes in Kansas have the potential to carry diseases, such as West Nile virus (WNV), most of the public concern has to do with the increase in biting mosquitoes. Large increases in mosquito populations during a flood has the potential to hamper recovery work as people stay inside to seek relief from the biting insects. In addition vector control expenses, above those normally spent in a county, may be reimbursed by the Federal Emergency Management Agency only if mosquito surveillance is being conducted.

The Atchison and Doniphan County Health Departments began mosquito surveillance the week of July 25th and will continue weekly through the second week of September. The Fort Leavenworth Army Preventive Medicine staff is currently conducting mosquito surveillance and shares their results with the Kansas Department of Health and Environment (KDHE). Three CDC light traps are used to collect mosquitoes in each county weekly. The mosquitoes are submitted to the Kansas Biological Survey for identification and West Nile virus vectors are submitted to the Kansas Health and Environmental Laboratories for WNV testing. Results are reported to the counties weekly. All WNV mosquito test results are reported to CDC's arboviral disease surveillance system, Arbonet.

There have been a total of five weeks of surveillance; currently all mosquitoes submitted have tested negative for WNV. In both Atchison and Doniphan county the majority of mosquitoes are either *Culex* or *Anopheles* genus. *Culex* are WNV vectors and are most active at night and breed in standing, stagnant water. *Anopheles* are also WNV vectors, are most active at dusk and dawn, and breed in floating vegetation or under overhanging banks along rivers, streams, lakes, and ponds.

Atchison County saw a dramatic increase in the number of mosquitoes during the third week of surveillance (August 9th).

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Calendar of upcoming Events:

KS-EDSS User Group

When: Thursday, September 8, 2011, 9-10 a.m.

Where: Prairie Conference Room, 3rd Floor, Curtis State Office Building, Topeka or join by webinar

Details: Contact Susan Dickman at 785-296-7732 or ksedssadmin@kdheks.gov for more information or register at https://www1.gotomeeting.com/register/437070281

The 68th Annual KPHA Fall Conference

When: September 20-22, 2011

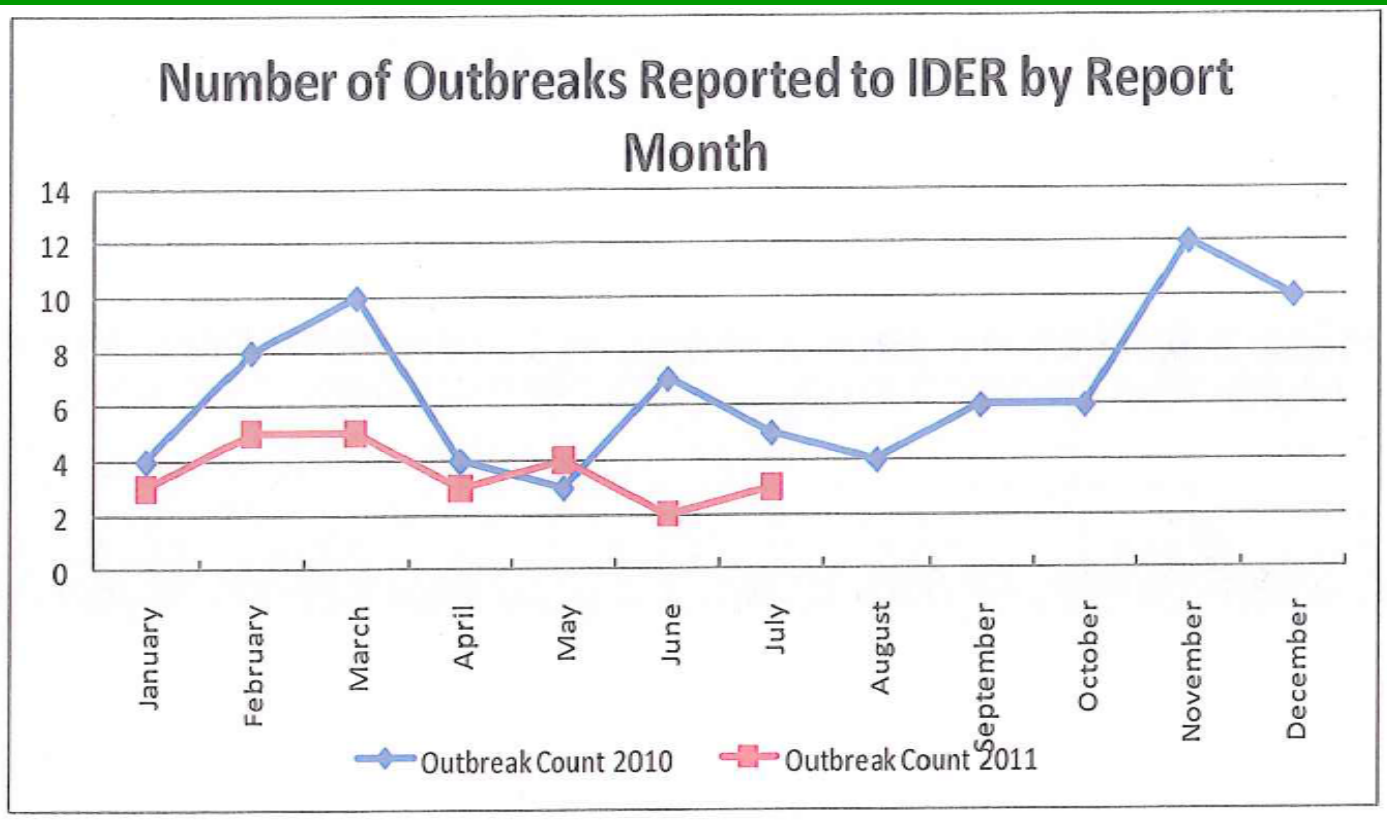
Where: Hyatt Regency in Wichita, KS

Details: The theme this year is ***Promoting Healthy Minds and Bodies***. The Conference will also feature free flu vaccines, free massages, and lots of networking with your fellow colleagues . For more information visit http://www.kpha.camp8.org/events?eventId=177925&EventViewMode=EventDetails

Have an upcoming event you would like included in the next issue?

Contact vbarnes@kdheks.gov with details.

Monthly Outbreak Summaries



Johnson County Varicella Outbreak —

On July 18, 2011, the Kansas Department of Health and Environment was notified by a private physician's office of a confirmed case of varicella. Johnson County Health Department was notified and began investigating the source and identifying this case's contacts. Additional cases were identified at the daycare where this child attended. Five of the ten (50%) children in the same room at the daycare became symptomatic with varicella. All children in this room were unvaccinated because they were at or under the age of one year. An additional two cases were identified in siblings of cases.

Both of these cases had received one varicella vaccine. The onset dates ranged from June 27, 2011 to August 10, 2011. The childcare center excluded the unvaccinated children from the one year old room and no other susceptible contacts were identified in the remaining rooms at the daycare or outside the daycare. No other cases were identified among the vaccinated children at the daycare.

For reports of recently conducted outbreak investigations, please visit our website at http://www.kdheks.gov/epi/outbreaks.htm

To report an outbreak call the Epi Hotline: 1-877-427-7317

Continued — Mosquito Surveillance Conducted in Response to Northeast Kansas Floods

- *Continued from page 1*

Although removal of the breeding habitat (e.g. floodwater) is not possible it is important to remind citizens about the steps that they can take to protect themselves, their families and pets.

Reduce the amount of surface area of your skin for mosquitoes to bite by wearing long sleeves and pants (when possible), use DEET or other effective repellent (be sure to read the label), empty or freshen containers that hold water frequently (e.g. bird baths, water bowls, etc.), vaccinate horses against WNV and keep your dogs on heartworm prevention (as many different types of mosquitoes can carry heartworm disease).

This rapid response could not have been possible without the help and dedication of the following individuals; Connie Ziet, RN (Atchison County Health Department), Sheryl Pierce, RN (Doniphan County Health Department), Captain Ehren Linderman (Fort Leavenworth), Dr. Christopher Rogers (Kansas Biological Survey), Brian Hart (Kansas Health and Environmental Laboratories).

Anopheles (above) and *Culex* genus.

Retrospective Immunization Coverage Survey Summary

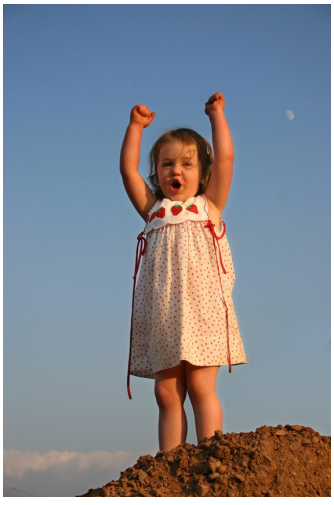
The Kansas Certificates of Immunizations (KCIs) and other immunization records for children enrolled in a kindergarten class in Kansas public and private schools during the 2010-2011 school year were collected and evaluated for immunization coverage levels. Children born between September 2, 2004 and September 1, 2005 were included in this study, and their immunization coverage levels at 24 months of age which corresponds to September 2, 2006 and September 1, 2007 were analyzed. The results for this survey were measured against similar previous studies. In total, there were 792 schools, 690 public and 102 private, included in the analysis, which consisted of a representative sample of 12,912 children from both public and private schools.

Coverage at 24 Months of Age

The statewide coverage level for the 4-3-1-1-3-3 series (DTaP4, Polio3, MMR1, Hib3, and HepB3) for children by 24 months of age was 71.5% and did not increase, compared to the 2009-2010 Retrospective Study, and remains below the Healthy People 2010 goal of at least 80%. Hib3, which had a coverage level of 87.8%, is the only vaccination of the 4-3-1-1-3-3 series that increased significantly from the previous year's study. Varicella vaccination, which has been required for school entry since the 2005-06 school year, increased significantly to 85% by 24 months of age. The coverage levels for PCV3, which is not required for school entry, increased significantly by more than 10 percentage points to 81%.

The 105 counties were grouped into 3 categories based on population density, and coverage levels were compared among these groups. Counties that were "sparsely populated" (<20 persons per square mile) had higher coverage levels for the 4-3-1-3-3 series (77.7%) than "moderately populated" (20 – 149.9 persons per square mile, 72%) and "urban" (≥150 persons per square mile, 69.8%) counties. DTaP4, Polio3, MMR1, and HepB3 showed no significant variation in coverage levels between population density groups. Two counties had 100% coverage for all vaccinations; both were sparsely populated.

To view the whole report, please visit the KDHE Immunization Program website at http://www.kdheks.gov/immunize/download/retrospective_2010-11..pdf



Breakdown of the 635 Cases* in KS-EDSS by Disease	July 2011	Average 08-10
Animal Bite, Potential Rabies Exposure	**8**	2
Calicivirus/Norwalk-like virus (norovirus)	**2**	1
Campylobacter Infection (Campylobacter spp.)	**66**	70
Cryptosporidiosis (Cryptosporidium parvum)	**9**	15
Dengue	**1**	2
Ehrlichiosis, Anaplasma phagocytophilum	**3**	5
Ehrlichiosis, Ehrlichia chaffeensis	**13**	9
Enterohemorrhagic Escherichia coli O157	**4**	5
Enterohemorrhagic Escherichia coli shiga toxin positive (not serogrouped)	**8**	1
Enterohemorrhagic Escherichia coli shiga toxin positive (serogroup non-0157)	**5**	5
Giardiasis (Giardia lamblia)	**11**	18
Haemophilus influenzae, invasive	**3**	2
Hemolytic Uremic Syndrome, Post-diarrheal	**1**	0
Hepatitis A	**40**	18
Hepatitis B, acute	**8**	5
Hepatitis B, chronic	**40**	39
Hepatitis C virus infection, chronic	**150**	160
Hepatitis C, acute	**1**	0
Histoplasmosis	**1**	0
Legionellosis	**2**	1
Lyme Disease (Borrelia burgdorferi)	**27**	51

Breakdown of the 635 Cases* in KS-EDSS by Disease	July 2011	Average 08-10
Meningitis, other bacterial	**3**	1
Meningococcal Disease (Neisseria meningitidis)	**1**	0
Mumps	**8**	4
Non-Reportable Condition	**8**	0
Pertussis (Bordetella pertussis)(Whooping cough)	**23**	35
Q Fever (Coxiella burnetti), Acute	**1**	1
Rabies, Animal	**5**	9
Salmonellosis (Salmonella spp.)	**51**	63
Shigellosis (Shigella spp.)	**4**	16
Spotted Fever Rickettsiosis (RMSF)	**61**	52
Streptococcal Disease, Invasive, Group A (Streptococcus pyogenes)	**3**	2
Streptococcus pneumoniae, invasive	**3**	6
Tularemia (Francisella tularensis)	**4**	4
Typhoid Fever (Salmonella typhi)	**1**	0
Varicella (Chickenpox)	**49**	22
West Nile, non-neurological (includes WN Fever)	**7**	18

**Cases reported include cases with the case classifications of Confirmed, Probable, Suspect, and Not a Case*

*** Increase in Hepatitis A, Total laboratory reports submitted to KDHE, not an increase in actual cases of Hepatitis A*

† *Increase of clostridium perfringens food intoxication cases due to an outbreak*

Please visit us at:
www.kdheks.gov/epi

KS-EDSS Data Quality Indicators

KDHE BEPHI emailed local health department users and administrators their county level quality indicator data this month. The Bioterrorism Regional Coordinators also received a copy of the regional breakdown of the quality indicators. At this time the report included the county's preliminary data for the previous month. We hope to improve this process by adding a second report that will compare preliminary month data with final data. For example, for August local health departments would receive one report that includes preliminary numbers for July data and a second report with June preliminary completion data side-by-side with June final data (We will pull a June report August 1st with the assumption that all June cases should have the basic quality indicator fields completed at this point.) Please email vbarnes@kdheks.gov if you received an incorrect report, have questions, or believe you should have received a report but did not.

Fields in **bold blue** have improved since the previous month. Frequency of completion has declined in *italic brown* fields. All other fields in have not changed since the previous month. - Virginia Barnes

*Calculations do not include Hepatitis B, chronic or Hepatitis C, chronic (denominator: 562 cases).
** Out-of-state cases not included in this calculation.
# Animal rabies not included in this calculation (den: 745 cases).
† Unknown considered incomplete.
†† Only diseases with supplemental forms included in this calculation (den: 585 cases)

August 2011	State's Total Case = 635	
KS-EDSS Indicator	Field Completed:	Percent Complete:
Address Street	**521**	**82% **, #**
Address City	**629**	**99% ****
Address County	*630*	*99% **
Address Zip	**601**	**95% ****
Date of Birth	**624**	**98% #**
Died	*287*	*45% †*
Ethnicity	*333*	*52%, #,†*
Hospitalized	*284*	*45%, #, †*
Imported	145	23%
Onset Date	*150*	*34% *, #*
Race	*373*	*59%, #, †*
Sex	635	100%, #, †
Supplemental Form Complete	**291**	**48% ††**
Supplemental Form Partial	56	9% ††

KDHE Mission:

To Protect the Health and Environment of all Kansans by Promoting Responsible Choices

Our Vision

Healthy Kansans living in safe and sustainable environments.